

Remarks

This is responsive to the Office Action mailed December 8, 2005. The amendments and remarks herein are proper, are supported by the specification, and do not include new matter.

Restriction/Election Requirement

Applicant gratefully acknowledges the Office withdrawing the restriction requirement as requested.

Claim Objections

Claims 29 and 30 stand objected to for informality, in that they lack indentation and are allegedly only preambles. Applicant respectfully traverses the characterization that the claims as formerly presented were only preambles, but has nonetheless amended the claims without prejudice to obviate the objection.

As for former claim 29, there is clear basis in the law that when the structure-connoting term "circuit" is coupled with a description of the circuit's operation, sufficient structural meaning generally will be conveyed to persons of ordinary skill in the art. *Linear Technology Corp. v. Impala Linear Corp.* 72 USPQ2d 1065 (Fed. Cir. 2004)

Also, applicant acknowledges that 37 CFR 1.75(e)(i) states that where multiple steps are recited they should be separated by an indentation, but Applicant is unaware of any mandatory requirement to do so. Applicant respectfully points out that such indentation is not applicable to claim 29 because the recited description of the circuit operation does not have multiple elements or steps.

Also, although 37 CFR 1.75(e) states that a claim drawn to an improvement should use a transition phrase, Applicant is unaware of any mandatory requirement to do so.

Nevertheless, solely in order to facilitate progress on the merits by obviating the present objection, Applicant has amended claim 29 without prejudice to more particularly recite the transition phrase "comprising." Withdrawal of the objection to claim 29 is respectfully requested.

As for former claim 30, Applicant acknowledges that 37 CFR 1.75(e)(i) states that where multiple steps are recited they should be separated by an indentation, but Applicant is unaware of any mandatory requirement to do so.

Nevertheless, solely in order to facilitate progress on the merits by obviating the present objection, Applicant has amended claim 30 without prejudice to more particularly indent the recited steps. Withdrawal of the objection to claim 30 is respectfully requested.

Rejection Under 35 USC 112 Second Paragraph

Claims 29 and 30 also stand rejected under Section 112 for lacking indentation and allegedly being only preambles. As above, Applicant respectfully traverses the characterization that the claims as formerly presented were only preambles, but has nonetheless amended the claims without prejudice to obviate the rejection. Withdrawal of the rejection is respectfully requested.

Rejection Under 35 USC 103(a)

Claims 1, 4, 5, 9-11, 15, 21, 24-26, and 28-30 stand rejected as being unpatentable over McNeil '305 in view of Makansi '959. This rejection is respectfully traversed.

Claim 1

No prima facie case of obviousness has been substantiated because the cited references do not teach or suggest all the features of claim 1, and because no evidence has been produced that a skilled artisan would be motivated to combine the references. If the Examiner does not produce a *prima facie* case, then Applicant is under no obligation to submit evidence of nonobviousness. However, Applicant has amended claim 1 without prejudice solely in order to more particularly point out and distinctly claim the patentable subject matter in an attempt to advance the merits of this case by obviating the present rejection.

No prima facie case of obviousness has been substantiated because the cited references do not, neither alone nor together, teach or suggest *predict error rate performance in relation to a first of the alternative digital configurations for both the input data and output data and, alternatively, to a second of the alternative digital configurations for both the input data and output data*, as in the present embodiments as claimed.

Applicant agrees with the Examiner to the extent that McNeil '305 does not teach or suggest *characterize the input and output data in at least two alternative digital configurations* as recited in claim 1 (Office Action of 12/8/2005, pg. 4). However, Applicant submits that McNeil '305 also does not teach or suggest *predict error rate performance in relation to a first of the alternative digital configurations for both the input data and output data and, alternatively, to a second of the alternative digital configurations for both the input data and output data* as recited in claim 1. Although Makansi '959 teaches employing different RLL coding, it does so in order to achieve a uniform transition density at constant clock frequency throughout the entire disc. Makansi '959 is wholly silent

about selecting an RLL code in relation to error rate performance; in fact, Makansi '959 does not contain the word "error." Accordingly, Makansi '959 does not cure the deficiency of McNeil '305 with respect to *predict error rate performance in relation to a first of the alternative digital configurations for both the input data and output data and, alternatively, to a second of the alternative digital configurations for both the input data and output data.* Accordingly, the cited references do not substantiate a prima facie case of obviousness for failure to teach or suggest all the recited features of claim 1.

Furthermore, no prima facie case of obviousness has been substantiated because the only way that the Examiner can supply the *predict error rate performance in relation to a first...and...to a second...digital configurations* is by improper hindsight reconstruction.

For a prima facie case of obviousness to exist, there must be an objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art that would lead an individual to combine their relevant teachings of the references. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). The motivation may come explicitly from statements in the prior art, from knowledge of one of ordinary skill in the art, or even in the nature of the problem to be solved. *In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000) The presence or absence of motivation is a question of fact, and the evidence that motivation exists must be clear and particular. *In re Dembiczak*, 175 F.3d 994, 1000 (Fed. Cir. 1999). However, generalized statements of advantages or possibilities by an Examiner, without a bona-fide regard to the desirability or feasibility of modifying the cited references, does not meet the evidentiary requirements for substantiating a *prima facie* case of obviousness. Given the subtle but powerful attraction of a hindsight-based obviousness analysis, a rigorous

application of the requirement of an evidentiary basis for the motivation must be followed. *In re Dembiczak*, at 999.

In the present case the skilled artisan will readily recognize that neither McNeil '305 nor Makansi '959 teach or suggest *predict error rate performance in relation to a first of the alternative digital configurations for both the input data and output data and, alternatively, to a second of the alternative digital configurations for both the input data and output data*. Even if the cited references did disclose or suggest all the features of the claim 1, which they do not, the Examiner provides no substantiated basis for express motivation to combine and/or modify the cited references to arrive at the present embodiments as claimed. In the absence of express motivation to combine the references, a generalized statement that modifications of the prior art to meet the claimed invention would have been within the knowledge of a skilled artisan because all aspects of the claimed invention are individually taught by different references (in the Examiner's view) is not sufficient to substantiate the motivation or suggestion required by a bona fide prima facie case of obviousness. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993); *In re Kotzab*, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000); *Al-Site Corp. v. VSI Int'l Inc.*, 50 USPQ2d 1161 (Fed. Cir. 1999); MPEP 2143.01.

Applicant and the Examiner agree that McNeil '305 teaches an error rate determination at only one RLL configuration. Similarly, Makansi '959 teaches using only one RLL configuration within each zone. Makansi '959 would certainly not motivate determining an error rate at different RLL configurations for the input and output data stored in a particular zone. Such a suggestion would defeat the purpose of Makansi '959, which

maintains only one predetermined RIL configuration within each of the predetermined zones.

The only way the Examiner is able to supply the *predict error rate performance in relation to a first of the alternative digital configurations for both the input data and output data and, alternatively, to a second of the alternative digital configurations for both the input data and output data* limitation is via improper hindsight reconstruction. The Examiner has not pointed to any passage of either cited reference that supplies this limitation, or that motivates the skilled artisan to perform an error determination for data stored at a particular location at two or more digital configurations. The only place the Examiner can find this limitation is by using the Applicant's disclosure against it to extrapolate the misplaced generalizations of what "could be" from the related art. In this case where the entirety of the legal conclusion of obviousness rests on the Examiner's generalizations, there is lacking the requisite concrete evidence in the record to support them. *In re Zurko*, 258 F.3d 1379, 1385-86 (Fed. Cir. 2001) Rather, the only "evidence" is what the Examiner views to be "well recognized" or what the skilled artisan would be "well aware of."

Notwithstanding the lack of a *prima facie* case, Applicant has amended claim 1 without prejudice solely in order to more particularly point out and distinctly claim the patentable subject matter of the present embodiments, and thereby to facilitate prosecution on the merits. Claim 1 as amended recites *characterize the stored input data and the retrieved output data in at least two alternative digital configurations*.

This more particularly distinguishes over Makansi '959 which does not teach or suggest *characterizing the stored input data*, but rather discloses storing the characterized

data. That is, Makansi '959 encodes the data in blocks 7a – 7c before storing it in block 2 of FIG. 1.

Accordingly, the cited references certainly cannot substantiate an obviousness rejection over amended claim 1 because the cited references do not, alone or together, teach or suggest all the features as claimed. Furthermore, there is lacking the concrete evidence in the record to substantiate a motivation to combine and modify the cited references to arrive at the present embodiments as claimed, as discussed above. Reconsideration and withdrawal of the present rejection of claim 1 and the claims depending therefrom are respectfully requested.

Claim 15

No prima facie case of obviousness has been substantiated because the cited references do not teach or suggest all the features of claim 15, and because no evidence has been produced that a skilled artisan would be motivated to combine the references. If the Examiner does not produce a *prima facie* case, then Applicant is under no obligation to submit evidence of nonobviousness. However, Applicant has amended claim 15 without prejudice solely in order to more particularly point out and distinctly claim the patentable subject matter in an attempt to advance the merits of this case by obviating the present rejection.

No prima facie case of obviousness has been substantiated because the cited references do not, neither alone nor together, teach or suggest *arranging the input data into a selected digital configuration from a plurality of different selectable digital configurations*, as in the present embodiments as claimed.

Applicant agrees with the Examiner to the extent that McNeil '305 does not teach or suggest *characterize the input and output data in at least two alternative digital configurations* (Office Action of 12/8/2005, pg. 4). However, Applicant submits that Makansi '959 does not cure the deficiency because the *arranging the input data* step is performed on data that is stored to a data storage medium via the *using a digital data channel* step. Accordingly, the cited references do not substantiate a *prima facie* case of obviousness for failure to teach or suggest all the recited features of claim 15.

Furthermore, for the same reasons discussed above, no *prima facie* case of obviousness has been substantiated because the only way that the Examiner can supply the *arranging the input data step* is by improper hindsight reconstruction.

Notwithstanding the lack of a *prima facie case*, Applicant has amended claim 15 without prejudice solely in order to more particularly point out and distinctly claim the patentable subject matter of the present embodiments, in order to facilitate prosecution on the merits. Claim 15 as amended recites *after storing the input data in the using step, arranging the input data into a selected digital configuration from a plurality of different selectable digital configurations*.

This more particularly distinguishes over Makansi '959 which does not teach or suggest *after storing the input data in the using step, arranging the input data...*, but rather encodes the data in blocks 7a – 7c *before* storing it in block 2 of FIG. 1.

Accordingly, the cited references certainly cannot substantiate an obviousness rejection over amended claim 15 because the cited references do not, alone or together, teach or suggest all the features as claimed. Furthermore, there is lacking the concrete evidence in the record to substantiate a motivation to combine and modify the cited references to arrive

at the present embodiments as claimed, as discussed above. Reconsideration and withdrawal of the present rejection of claim 15 and the claims depending therefrom are respectfully requested.

Claim 28

No *prima facie* case of obviousness has been substantiated because the cited references do not teach or suggest all the features of claim 28, and because no evidence has been produced that a skilled artisan would be motivated to combine the references. If the Examiner does not produce a *prima facie* case, then Applicant is under no obligation to submit evidence of nonobviousness. However, Applicant has amended claim 28 without prejudice solely in order to more particularly point out and distinctly claim the patentable subject matter in an attempt to advance the merits of this case by obviating the present rejection.

No *prima facie* case of obviousness has been substantiated because the cited references do not, neither alone nor together, teach or suggest *means for predicting error rate performance* as in the present embodiments as claimed. Applicant reiterates that claim 28 is a proper linking claim written in means plus function format in accordance with 35 U.S.C. §112, sixth paragraph (MPEP 809.03). The Applicant has identified the function associated with the recited "means" element as being the efficient prediction of error rate in a circuit storing input data and retrieving output data from a storage medium, by storing both the input data and the output data once and then arranging the stored data in different configurations for predicting the error. (see, for example, specification paragraph [0078]) The Examiner is obliged as a matter of law to construe this means element as the disclosed

structure, and equivalents thereof, that are capable of the identical function. See *B. Braun Medical, Inc. v. Abbott Lab.*, 43 USPQ2d 1896, 1900 (Fed. Cir. 1997); *In re Donaldson Co. Inc.*, 26 USPQ2d 1845 (Fed. Cir. 1994)(*en banc*); *In re Dossel*, 42 USPQ2d 1881 (Fed. Cir. 1997); *Supplemental Examination Guidelines for Determining the Applicability of 35 U.S.C. 112, Para. 6*, 65 FR 38510. Failure to do so constitutes reversible error.

In some embodiments the disclosed structure for carrying out the claimed functionality is shown in FIG. 12, including the allocated portions of RAM for storing the input and readback data once, in RAM 322, 324, respectively, and for storing the multiple configurations of the input and readback data in RAM 342, 344, respectively. The disclosed structure further includes the symbol comparator 326 and the interleave counter 346, as well as executable instructions stored in memory for performing the CHANNEL PERFORMANCE CHARACTERIZATION method of FIG. 11 with this disclosed structure. Once this means-plus-function claim is properly construed, it is clear to the skilled artisan that the cited references fail to disclose any structure that is capable of the identical function as claimed. Furthermore, for the same reasons discussed above, no *prima facie* case of obviousness has been substantiated because the only way that the Examiner can supply the *means for predicting error rate performance* is by improper hindsight reconstruction.

Notwithstanding the lack of a *prima facie* case, Applicant has amended claim 28 without prejudice solely in order to more particularly point out and distinctly claim the patentable subject matter of the present embodiments, in order to facilitate prosecution on the merits. Claim 28 as amended recites *means for predicting error rate performance in relation to a selected digital data configuration of a plurality of different digital data configurations for both the same input data and the same output data.*

This more particularly distinguishes over Makansi '959 which does not teach or suggest arranging the same data in different configurations, but rather encodes the data in blocks 7a – 7c and decodes the data in blocks 9a-9c only once and entirely in relation to the head position (in which zone the data is stored/retrieved).

Accordingly, the cited references certainly cannot substantiate an obviousness rejection over amended claim 28 because the cited references do not, alone or together, teach or suggest all the features as claimed. Furthermore, there is lacking the concrete evidence in the record to substantiate a motivation to combine and modify the cited references to arrive at the present embodiments as claimed, as discussed above. Reconsideration and withdrawal of the present rejection of claim 28 and the claims depending therefrom are respectfully requested.

Claim 29

No prima facie case of obviousness has been substantiated because the cited references do not teach or suggest all the features of claim 29, and because no evidence has been produced that a skilled artisan would be motivated to combine the references. If the Examiner does not produce a *prima facie* case, then Applicant is under no obligation to submit evidence of nonobviousness.

No prima facie case of obviousness has been substantiated because the cited references do not, neither alone nor together, teach or suggest *characterizing both the stored data...in a selected digital configuration from a plurality of different selectable digital configurations*, as in the present embodiments as claimed.

Applicant agrees with the Examiner to the extent that McNeil '305 does not teach or suggest *characterize the input and output data in at least two alternative digital configurations* (Office Action of 12/8/2005, pg. 4). However, Applicant submits that Makansi '959 does not cure the deficiency because Makansi '959 does not teach or suggest *characterizing both the stored data*; rather, Makansi '959 only teaches or suggests storing characterized data. That is, Makansi '959 first encodes the data in block 7a – 7c and then stores the encoded data in block 2. Accordingly, the cited references do not substantiate a prima facie case of obviousness for failure to teach or suggest all the recited features of claim 29.

Furthermore, for the same reasons discussed above, no prima facie case of obviousness has been substantiated because the only way that the Examiner can supply the *characterizing both the stored data* is by improper hindsight reconstruction.

Accordingly, the Examiner has failed to substantiate a *prima facie* case of obviousness over claim 29 because the cited references do not, alone or together, teach or suggest all the features as claimed. Furthermore, there is lacking the concrete evidence in the record to substantiate a motivation to combine and modify the cited references to arrive at the present embodiments as claimed, as discussed above. Reconsideration and withdrawal of the present rejection of claim 29 and the claims depending therefrom are respectfully requested.

Claim 30

No prima facie case of obviousness has been substantiated because the cited references do not teach or suggest all the features of claim 30, and because no evidence has been produced that a skilled artisan would be motivated to combine the references. If the

Examiner does not produce a *prima facie* case, then Applicant is under no obligation to submit evidence of nonobviousness.

No *prima facie* case of obviousness has been substantiated because, as for claim 29 above, the cited references do not, neither alone nor together, teach or suggest *characterizing stored data in a selected digital configuration from a plurality of selectable digital configurations...*, as in the present embodiments as claimed.

Applicant agrees with the Examiner to the extent that McNeil '305 does not teach or suggest *characterize the input and output data in at least two alternative digital configurations* (Office Action of 12/8/2005, pg. 4). However, Applicant submits that Makansi '959 does not cure the deficiency because Makansi '959 does not teach or suggest *characterizing stored data*; rather, Makansi '959 only discloses storing characterized data. That is, Makansi '959 first encodes the data in block 7a – 7c and then stores the encoded data in block 2. Accordingly, the cited references do not substantiate a *prima facie* case of obviousness for failure to teach or suggest all the recited features of claim 30.

Furthermore, for the same reasons discussed above, no *prima facie* case of obviousness has been substantiated because the only way that the Examiner can supply the *characterizing stored data* is by improper hindsight reconstruction.

Accordingly, the Examiner has failed to substantiate a *prima facie* case of obviousness over claim 30 because the cited references do not, alone or together, teach or suggest all the features as claimed. Furthermore, there is lacking the concrete evidence in the record to substantiate a motivation to combine and modify the cited references to arrive at the present embodiments as claimed, as discussed above. Reconsideration and withdrawal of the present rejection of claim 30 are respectfully requested.

Conclusion

This is a complete response to the Office Action of December 8, 2005.

The Applicant has filed herewith a request for telephone interview with the Examiner's supervisor, Mr. Decady, to be held before anyone issues the next action on the merits.

Although Applicant believes progress on the merits was finally made on this latest Office Action, Mr. Decady previously agreed to a telephone interview on this case before it issued. For reason unknown to Applicant that interview unfortunately did not take place.

The Applicant respectfully requests that all of the pending claims be passed to issuance.

Respectfully submitted,

By: 

Mitchell K. McCarthy, Registration No. 38,794
Randall K. McCarthy, Registration No. 39,297
Fellers, Snider, Blankenship, Bailey and Tippens
100 N. Broadway, Suite 1700
Oklahoma City, Oklahoma 73102
Telephone: (405) 232-0621
Facsimile: (405) 232-9659
Customer No. 33900